DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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WORK FOR THE SEASON.

JUNE is the first warm month in the year. It is a time of peculiar beauty. All nature is adorned with living green. The beautiful trees are in full foliage and vigorous growth, and the earth is clothed with luxuriant herbage. This is a very hurrying season with the farmer; frequently before he has done planting, the weeds start up among his crops and contend for the mastery.

Planting.—Those who have not finished planting corn and potatoes, should attend to the business as soon as possible, as it is growing late. An early frost may destroy late planted corn; and late planted potatoes are most liable to rot. In planting late, early kinds should be used, unless you have a hardy variety, like the Black potato, for instance.

Squashes, &c.—In planting squashes, melons and cucumbers, the better way is to plant many seeds, and then if insects come to destroy them, by daily attention to killing the insects, they will eat only a part of the plants, and there will be enough left. We have followed this method for years, and have never failed to have plants enough to cover the ground. It requires but little expense as the insects abound only a few days.

Beans.—The small pea bean is late, and should be planted as early as the first of this month; but the Bremen, (called also Kidney,) and the Merimachee (called Pierce bean in the Boston market) are early varieties and bear planting as late as the 20th of June. They are both white beans, and good varieties.

Weeding.—The weeds are growing while the cultivator is asleep, and in stormy weather when he cannot destroy them. A little neglect requires much extra labor. If a piece of land be neglected a week or ten days, after the proper season for weeding, which is at an early period, four or five times the labor will be required to destroy the weeds; and this loss of labor is not the only disadvantage, the weeds choke and shade the cultivated plants, and rob them of their food—of that very food which is then prepared to nourish them in their tender state.

Hilling.—The practice of hilling plants is fast going out of fashion. Nearly all of our best farmers till their corn on a level; and many have discontinued the practice of hilling potatoes. Let any one who hills his potatoes, examine them after a powerful rain has succeeded a drought, and he will find that while land on a level is well saturated with water, his potato hills are dry. If there is any advantage in hilling any plants, it is on wet land, as the hills throw off the water, which settles down in the hollows made by digging up the earth to make hills. This leaves the hill comparatively dry; of course hilling on dry land, or land of medial texture, is injurious.

Cabbages require less labor, and they succeed as well, when sowed where they are to grow. It saves much time in transplanting. The Red Dutch is very late, and should be sowed early. Better when sowed in May. The Savoy is rather late, and ought to be sowed the first of June. The Drumhead is earlier and may be sowed from the first to the middle of June. The Low Dutch Drumhead is earlier than the larger kind, and will generally succeed well if sowed by the 15th or 20th.

Ruta-Baga and Cabbage Turnips may be sowed any time in this month. The first of the month is rather early for the former, as they are liable to grow corky when sowed early. From the 10th to the 25th of this month is a good period for sowing these turnips.

Pruning Fruit Trees.—It will answer to prune the latter part of this month, as the tree is not so full of sap as in the spring; but we prefer delaying this operation till July and August, for in June the bark peels readily, and will often start in sawing off a limb; and by going on to trees with hard boots or shoes, the bark will start and greatly injure the trees, unless great care be taken to avoid it.

Grape Vines.—Those who have neglected their vines till this late period, should consider that bet-

ter late than never. If the vines are forming a thick mass, cut back a part of last year's growth, leaving bearing buds that bid fair to produce good bunches of fruit. Cut out all feeble branches, and if very thick, cut out some of the least thrifty main branches. Do this soon. Vines will not generally bleed at this season. But there are exceptions; we have seedlings that will bleed after sending out shoots three feet long.

Sheep and Lambs.—Sheep that are shorn should be protected from cold storms, else they will suffer severely and be liable to perish or be seriously injured. If smeared with sulphur and lard, or any kind of grease and oil, melted together, it will be a great protection against damp weather, destroy insects, and tend to cure cutaneous disorders. When the sheep are shorn the ticks take shelter in the warm fleece of the lambs, and should be thoroughly destroyed. The most effectual and safest mode is to fumigate the fleece with tobacco smoke. A decoction of tobacco and other poisonous substances as a wash is injurious and dangerous, and mercurial ointment and other powerful mineral substances should be avoided.

TO CORRESPONDENTS.

We have had a good supply of communications for the paper, but recently there has been a falling off. We hope that our friends not will forget us in the busy season for practical operations.

If it is agreeable to our correspondents, we prefer having their names and dates to their articles. There are many advantages in this. Sometimes we wish to communicate with them; and occasionally a reader wishes to correspond with a writer, for the purpose of further information, or to procure some article from him; or he may wish, when convenient, to visit him and see the result of his experiments. Again a writer's name and date often gives importance to an article, more than is attached to one without "a local habitation and a name."

Yet on this subject we only recommend; we would not dictate; we request all who communicate for the paper, and do not add their names and locality to their articles, to give them separately.

All correspondents out of the State are requested to add the State to their communications, for we often receive articles with nothing to indicate the State. It may have been marked on the envelope, but that is often illegible, and frequently the envelope is thrown one side and not filed with the letter.

In all cases we will attend to the correction of errors in grammar, whether in words, spelling or punctuation, but we wish for correspondents to express in a plain hand, and plain style, their thoughts. Sometimes a writer throws off an article in great haste for the paper, and evidently does not revise it, and asks us to correct errors. Now this is asking too much for us to correct errors of thought or expression. Let the writer revise and see that he expresses clearly what he means, and we will attend to the rest.

But few writers are well acquainted with punctuation, but all can put a period at the end of a sentence, and begin the next sentence with a capital letter. This would in some cases be of great advantage; for we have received articles without the least mark from one end to the other; and articles will often admit of different constructions from the modes of punctuation. Again, we would say to correspondents that we depend greatly on them to make a valuable journal, and we are all mutually interested in this, and we solicit a continuance of their aid through the summer season.

NOTICES OF PUBLICATIONS.

Agriculture for Schools.—This is a new work by Rev. Dr. John L. Blake. A large portion of the work consists of choice specimens of Rural Literature, designed for reading in schools and academies, tending to elevate and improve the mind by a correct estimate of the importance of rural life and American industry. Other parts of the work consists of articles on practical and scientific agriculture, adapted to study, and more thorough instruction. Dr. Blake has long been known to the literary and scientific public, by his various standard works; and more recently to the agricultaral community, by his very interesting work, "The Farmer's Every-Day Book." He is an accomplished scholar, and accurate observer, and gives a polish and a charm to whatever he touches with his pen. 432 pages, 12 mo. New York: Mark H. Newman & Co.

Farm Journal is the name of the new agricultural paper just started at Lancaster, Pa., by A. M Spangler; edited by S. S. Halderman. Monthly, at $1 per year. It is well filled with instructive matter, and embellished with engravings.

QUASSIA A SUBSTITUTE FOR TOBACCO IN GARDENS.

Do you know that a decoction of Quassia is as effectual a remedy for green fly as tobacco liquor: and at the same time much less expensive, and a more cleanly thing to deal with? I have tried it here, and found it to answer well; it was, I believe, recommended originally in Mr. Loudon's book, but I saw it first in the *Midland Florist*. Now (when tobacco is much dearer than it used to be) is a good time to recommend a substitute; a quarter of a pound of Quassia (valued 3d,) will make a decoction sufficiently strong, if mixed with from three to four quarts of water: to make the decoction, pour about three pints of boiling water on the Quassia, and let it simmer before the fire for two or three hours. When about to use it, add the remaining quantity of water, and either dip the shoots or put on the liquid with a feather or brush. It is advisable to syringe the plants a day or two afterwards; not that I ever knew the application do harm without such precaution.

☞ Live up to all your engagements.

HAND CULTIVATOR.

This is a very neat, light and durable implement, made wholly of iron, excepting the handle. It is a very convenient implement in garden culture or in the field, among beets, carrots, onions, &c., where there is not sufficient width to use a horse.

The operator walks forward leisurely, with his hands behind him, clenched to the cross handle, and tears up the weeds and pulverizes the soil. As this is done with expedition, it may be repeated often, destroying the weeds thoroughly, by beginning in season when they are tender; and the frequent stirring of the soil will greatly promote the growth of the crop. The price of this implement is low.

MANAGEMENT OF BEES.

The season for swarming has arrived, and bees require constant attention. A person well acquainted with bees can generally judge from the condition of his hives, and from the weather, when they will swarm. Yet they should be watched, as sometimes a swarm comes out unexpectedly, even in weather and at a time of day which is unusual.

Generally, bees swarm in the forenoon, when the weather is warm and the sun bright; but we once had a swarm come out at six o'clock in the afternoon, when the weather was cool and cloudy. It was the only case we ever knew of bees swarming under circumstances so unfavorable. When they swarm so late, they would probably remain all night, if not hived.

When bees swarm, they usually pitch on green trees, if they are convenient. But they sometimes light on dry trees, fences, buildings, walls, small bushes, &c. We once had a swarm pitch on a current bush, though a plenty of high trees were around them.

Some apiarians set their bees where there are no trees near, and stick up poles, or dead spruces or pines, in front of them, on which they often pitch; and then the poles are taken up and laid down to hive them. If old mullen heads are tied on to the poles, giving the appearance of a bunch of bees, they will be more likely to light on them.

The following method often succeeds well. Place a board about 20 feet long, with one end just under the centre of the bee-house, and let it extend in front. About 5 or 6 feet from the outer end of the board, drive down a stake on each side, and tie another stake across these about 2 1-2 feet high. Lay the outer part of the board on the cross stake, the other end resting on the ground. When the bees swarm, if there are no trees or other inviting objects near, they will generally pitch on the under side of the board, which may be taken down, inverted, laid on the ground, and the hive set over them.

When bees pitch on the limbs of trees, the most convenient way to hive them, generally, is to cut off the limb, select a shady place among the grass or weeds, and lay down the limb, or with a sudden jerk, shake the bees on to the ground, and place the hive over them. Then throw a sheet over the hive, and sprinkle water plentifully over it.

By laying the limb down carefully, the bees are less disturbed, and of course less likely to sting. But they will not go into the hive so readily as when shaken off, as they often stick to the limb, and need disturbing by spreading them with a wing before they will go into the hive. We had a swarm that would not leave the limb, so we lay down on the ground close to them, and with a wing we spread them, and examined for the queen. We soon found her, and took her on the wing and put her into the top of the hive. Then the bees all started, and in a few minutes were with their sovereign.

When bees pitch on the body of trees, or valuable branches, or other things difficult to move, they may be brushed into a hive, or the hive may be fastened over them, and then if they do not go up soon, disturb them, as before named, and dash cold water around them. The sooner bees are set on the stand the better, after they have all gone into the hive; yet it will answer to let them remain until evening.

Sometimes, though probably very seldom, bees dislike their hive after they have gone into it, and go back into the old hive or go off. Some swarms cannot be suited with any hive. We once had a swarm that went into the hive, and soon returned to the parent hive. They swarmed again, and went into another hive offered them, and they appeared contented during the day; but towards night they went back again. They had made a piece of comb six inches long, and filled it with honey. They swarmed again and again, and new hives were offered them, and sometimes they went into the

After swarming a number of times they grew very cross. The eighth time they came out, they were extremely cross, and as soon as they were laid on the ground and a hive set over them, they all rose instantly and started for the woods. We kept up with them in an up-hill race, some one hundred rods, when they passed over a steep ascent, densely covered with trees and bushes, and we relinquished the pursuit, and never learned what shelter they had selected, to which they were so very partial. This was a singular case.

Bees leave the old hive with a full meal, and are generally in a good humor; and may be attended to without any danger; but they are sometimes cross, and it is well for the manager to be protected in difficult places, as on high trees. A friend of ours who had long experience in bees, laughed at our idea of having any protection in managing bees, but one sad case altered his mind. He was attending to a swarm in the top of a high tree, and hundreds attacked him simultaneously, so that he was glad to make a precipitate retreat, and he narrowly escaped with his life from the furious assault of so many formidable warriors.

If the operator is well protected, he can act deliberately in difficult cases. Take a piece of millinet about two feet long and some eighteen or twenty-five inches wide, and a piece of other thin cloth sufficient to make about three feet in width, when the two edges of each are sewed to each other, in the manner of a bag without top or bottom; make a wide hem at one end, and run in a string. Place this end over your hat, with the millinet in front, and draw and tie the string above the rim. Put on your hat, and place the lower part of the protection under your coat or jacket, and button closely over it. Leave it loose over the nose. We saw an operator who was protected by a thin, white handkerchief over his face, with a close fit to the nose. He treated the bees roughly, and that prominent member being the only part exposed, it became the centre of hostile operations by the enraged enemy.

The best thing to protect the hands is a pair of thick fringed mittens, as the bees cannot reach their stings through them, and they are not sufficiently firm to retain the stings. Thick leather gloves or mittens will serve as a protection, but all the bees that attempt to sting through them lose their lives, as they will leave their sting behind.

For the New England Farmer.

FOOD FOR COWS.

Cows, when giving milk, are more in need of the care of men of understanding than are any other kinds of stock. Chemistry shows us that milk is composed of a variety of properties. These properties vary in different kinds of milk, and in the milk of different animals of the same kind. It should be the study of the farmer to know what feed will supply the wants of the cow, that she may afford a good quantity of milk which shall be rich in its properties of composition, and at the same time afford the animal what is needed in forming bone and muscle.

A cow which gives milk that is rich in the properties which form bone and muscle, if kept upon such feed as supplies but a scanty amount of those properties, will give too much away in her milk and become weak in her own frame, and early become feeble as though old. If scantily supplied with the properties which form muscle, while affording a good supply of the muscle-forming properties in her milk, she will become weak and timid.

Calves, for their strength of frame or strength of muscle, depend very much upon the properties of the milk with which they are nourished. The milk depends on the properties which the cow receives in her food; for it must be evident that a cow cannot give away in her milk what she receives not in her food. If we would have any property, say phosphate of lime, in the frame of a calf, it must be in the milk which nourishes him. To have it in the milk, the cow that gives the milk must possess it sufficiently; it must be in her food. To produce food which contains it, the farmer must know what to produce. When he knows what crop to produce for this purpose, he needs then to know what manures to feed the soil with that he may produce the desired crop.

Most of the pasture lands in New England are unfit for the support of cows which give milk. Cows may live in them and give milk; but they are dwarfish in size, and their calves suffer also in the same respect; while their milk is much less in quantity, and much poorer in quality. We may supply ourselves with other breeds, and expect to remedy the evil. But time will show that our stock does not hold its own. The remedy is not there. We must know more about our profession. We must pay our humble tribute to science, and sit down willingly at the feet of instruction.

Thousands of farmers are desiring to improve their stock of cattle. The great portion of them are waiting to see the market supplied from the stock which has been imported. By the time that such an event shall take place, the charm will be gone; for the imported stock will, in too many hands, have suffered from the evils which have been referred to above. New importations will be made, and monstrous prices paid. But all must come under the same blighting circumstances, until the farmers of New England go to work in the right quarter. When we do, we shall be surprised at the worth of our "native breeds."

It is not the object of this article to disparage imported breeds of cattle. A higher and better object is before us. We ought to learn how to make the best of what we now have.

The new lands of the West are now in a better state to produce the necessary food for cows than the old lands of New England. The time is fast coming, however, when science must aid the West, as her aid is now needed in the East.

The blessings which God has placed within our reach are abundant, and we ought to learn how to improve upon them. C.

Mason, May 16, 1851.

☞ A pound of beef loses one-quarter by boiling; an ounce more by roasting.

For the New England Farmer.

ADVICE TO FOWL KEEPERS.

Have your hen house cleaned out, the nest emptied and scraped clean; or new ones put in lemon boxes are about as good an article as you can have. I am of opinion that tobacco boxes in some places would do well for nests. If the birds are troubled with insects, as they often are where they are housed up, a little anguentum, reduced with lard, is a sure cure. Rub a small quantity where the trouble arises, which is generally on the top of the head. Knits appear at the side of the nose and the chickens refuse to eat. For grown fowls, tobacco water rubbed on, in small quantity, will destroy them. If your henery contains insects, wash all parts of it with tobacco water with a brush. It may need to be repeated.

A box with ashes in it is a great luxury for them to shake in. Keep your fowl-house dry.—After your chickens have been hatched 1-2 day, I think it better to take them from the hen, into the house, till she gets through hatching, as she will keep moving to please those that are out, and tread on those that are about coming from the shell. I have tried it with success. You can put them under her at night. If other hens trouble her, cover a basket, or a like article, over the nest. Wet Indian meal for general food is the best. Boiled egg and the shell is a luxury to them. After a week give them a small quantity of wheat or oats, and sometimes a little fresh meat and potato. I have a brood of China chickens, 2 months old, and have not lost one of them. They have not had water but once; they are fat and smart. Too much drink, in my opinion, brings on dysentery.

I have kept my chickens under cover, in a good sized box, slatted over with lathes to keep the hen in, as jumping in would injure the chickens. I clean the box often. I have spoken particularly of chickens, as so many are lost by inexperience. I have now one hundred fowls of various kinds, and I am of opinion that as many eggs would be obtained of half the number, unless they are kept entirely separate, say 30 in a house together.

A variety of food is best, and by all means keep clam or oyster shells pounded fine for them to eat; as I think they make decidedly the best egg shells. If you wish to feed all your sitting fowls at one time, take them off the nest in the morning carefully, and you will be sure they are fed. I have done it several years; it saves much time in feeding.

You can see that each goes on her own nest again; for they sometimes change, or another hen may occupy a nest in the absence of the owner, and cause a fight on her return. B.

Remarks.—Tobacco and mercurial preparations are powerful and destructive to insects, but tobacco has a sickening effect on the animal, and has, in some cases, destroyed him, as well as the insects. Unguentum, in cases of exposure to wet or cold, is injurious, and sometimes fatal to the animal. New rum, in which camphor is dissolved, is excellent for the destruction of lice on hens, or for the same insects on the horse; and it is harmless in its effects, excepting it produces slight intoxication, when applied to the head of a young chicken.

The lice usually found on the heads of chickens soon after they are hatched, are large, rapid in their motions, and similar in their general appearance to those that infest some human heads.

The greatest evil of this kind that afflicts hens, is a minute insect, which under the magnifying glass resembles a wood-tick in appearance. They become numerous, and will suck the blood from hens on their nests, and often destroy them while sitting. They will suck the blood from hens on the roost, at night, and retire to cracks in the hen-house before morning, so that if the hens are examined, they cannot be found on them by day.—Close houses produce this evil, and a terrible evil it is.

If hens infested with these lice roost near horses, the lice will get on them; and though so small as to be hardly perceptible to the naked eye, without nice inspection, they are so formidable as to destroy this noble animal, unless a remedy be applied.

For the New England Farmer.

WHAT AILED MY HOG?

Mr. Editor:—In 6th month, last year, I bought a pig, and shut him up. He grew well, and I flattered myself with the prospect of having a fine hog next fall. About the commencement of cold weather, he began to be lame in one hind leg; soon both hind legs were diseased. The lameness increased until about the beginning of this year, when he refused to eat; his legs became useless, one of them swelled badly about the ankle joint, and, supposing he would soon die, I concluded to kill him. But my neighbors advised me to wait a little to see if he did not recover. After this he ate well for a time, but did not regain the use of his limbs. Finding it a hopeless case, I killed him the 7th of this month, when it appeared the disease was in the bones. Upon examination it was found that *both hind legs were broken;* one just above the gambrel joint, and the other where the first swelling appeared, and a callous had grown over the fractured parts, nearly an inch in thickness. The marrow in the broken thigh bone was a semi-liquid, and of a purple color. But this is not all. *Ten ribs on each side were broken off!* some of them had grown together, and others were apparently just fractured. All the ribs were so brittle that I could easily break them with my thumb and fore finger. Now the animal must have broken these bone by turning in his litter, for he had not been out of it in several weeks.

These are facts well known to my neighbors, who, with myself, wish to know the *cause* and the *remedy*, so that, should a similar case occur, we may be able to administer the proper remedy.

Perhaps some may say, "The hog needed earth;" but I think it was not so, for I frequently threw earth into the pen, and during his sickness I gave him sulphur, salts and charcoal.

I also kept another pig in the same enclosure, until the latter part of the 12th month, when I killed him in a perfect state of health. Their food was composed of ears of corn ground and mixed with potatoes. L. Varney.

Sandwich, N. H., 3d Mo. 31st, 1851.

☞ Earn your money before you spend it.

For the New England Farmer.

PEACH TREES.

Mr. Editor:—The statements in the last No. of the Farmer, of your correspondent of Middletown, Ct., in reference to his management of peach trees, has induced me to give you my experience, which in some respects I prefer to his. I have heard the idea repeatedly expressed that we can make no dependence on peach trees on account of the destructive ravages of the borer. So far as I have learned the habits of this insect, the borer leaves the tree in the fore part of June. It is then transformed into a miller, lays several hundred eggs, usually on the tree it has just left, which hatch the latter part of the season, and feed on the bark of the tree until one year from the next June, when they come forth to follow the example of their predecessors.

The last of May, I place three or four quarts of wood ashes, if the tree be large, and one or two if it be small, directly around the trunk of the tree, so that the ashes shall touch the tree on all sides, and are careful not to disturb them until the next Oct., when I hoe them from the tree both to enrich the soil and prevent their injuring the trunk of the tree.

I have about 500 peach trees from two to six years old, and I do not think I have ever found one dozen borers on them, although I have often looked for them with care.

When I have found them, it is a foot or more above the ground, and I think it more probable than not the eggs in such cases are transferred there by some insect or other means than the miller, as they are almost always found at the root of the tree at or a little below the surface of the ground. If the borers are once in the tree, the ashes will not destroy them, in which case he must dig them out with a wire or knife. But I am confident if ashes are applied as above they are an entire protection against the peach borer, so great is its aversion to them.

I either cultivate or thoroughly mulch my peach trees, and head them in early in spring, which I think pays the labor well.

Very respectfully yours, D. Alden.

Southboro', May 13, 1851.

Remarks.—Two great evils attend the cultivation of the peach; the Yellows and the Borer. So great are these evils that the cultivation of this most delicious fruit has been abandoned in some places. But this course in our opinion, shows a want of intelligence on the subject, for we think that these evils, formidable as they are, may be subjected to the complete control of the cultivator, and without much expense or inconvenience.

We have frequently published articles on the peach tree borer, and the one here presented shows good success; and if these remedies are not complete, they will generally succeed, and a little trouble in the use of the knife will give a finish to this pest. We intend to offer some remarks soon on the nature of the yellows, and a remedy.

Right of Occupants to Ground in front of their Houses.—At Philadelphia, on Saturday, action was brought by a hackman to recover damages from a police officer for assault and battery. The circumstances of the case were—Kee, the hackman, was standing in front of the United States Hotel, and was ordered to leave by the proprietor, On his refusal an officer was called and Kee was arrested. This constituted the assault. Judge Parson said in his decision, that every man owns the ground in front of his house. He has given to the public a right to pass and repass over it, but in all other respects it is as much his property as any other part of the premises. No one has a right to stand or carry on any business in front of any man's house, and if he is thus annoyed and notifies the party to leave, on a refusal, sufficient force may be used to compel the offender to go. The case was dismissed.—*N. Y. Com. Adv.*

THUNDER AND LIGHTNING.

The ancients had two opinions respecting the cause of thunder; some of them assigned it to inflamed exhalations rending the clouds wherein they were confined; others ascribed it to the higher and condensed clouds falling suddenly on a lower stratum with such force as expelled the intermediate air, which vigorously expanding itself, in order to occupy its former space, put all the exterior air in commotion, and produced the reiterated claps we call thunder. The latter of these opinions was held by Aristotle and Anaxagoras, the former by Leucippus, and partly by Democritus and Seneca. Chrysippus taught that lightning was the result of clouds being set on fire by violent winds, which dashed them one against another.

Among the moderns it is supposed that the air or atmosphere is not of one uniform electrical state, from the bottom to the top of it, but rather composed of a succession of positive and negative strata; the mixing suddenly of one stratum of these with the other is thought to occasion thunder and lightning; or rather the rush together of clouds of a positive and negative character. Others affirm that the sudden combination of oxygen and hydrogen gas in the higher regions of the air occasioned by an electrical discharge into them, when mixed, but not combined, occasion thunder and lightning; and the combination of the gases, water, or the heavy showers that accompany the phenomenon. The ratling noise we hear is owing to the sound being excited among clouds hanging over one another, between the arches of which agitated air irregularly passes; it also partly depends upon the reverberations from neighboring objects.

When thunder explodes high in the air it is harmless, but when it bursts on or near the earth, it often destroys trees, cattle and human beings. The proximity or distance may be estimated by the time that elapses between seeing the flash of lightning and hearing the thunder, for every second that intervenes 1,12t feet are counted—3 1-2 seconds show it is about one mile distant from us, 7 seconds two miles, and so on. Dr. Wallis observes that 7 seconds usually elapse between seeing the flash and hearing the clap, but often one second does not pass, which shows it is very near, or perhaps among us. To avoid the effects of this awful phenomenon Dr. Franklin advises us to apply metal conductors to the roofs of houses, masts of ships, &c., so that the conductor's sharp point at the upper end may reach two or three feet above the summit of the object, and continue from thence down

till the lower part be buried below the surface of the earth or water. Copper wire, about one-fourth of an inch thick, is generally used in these conductors. The safest place, during thunder, according to the doctor's advice, is the middle of a room, if in a house, on a chair placed on two or three beds or mattresses placed over each other; or in a hammock suspended from the middle of the ceiling by silken cords.

Dr. Priestly says the middle of a cellar is a secure place. We never should have about us any metallic substance, nor stand near metallic bodies—workmen ought to lay down their scythes, sickles, and spades, &c., and go a distance from them during thunder and lightning; ploughs, iron ones especially, should be unyoked. Men ought not to run up close to trees, hedges, walls, &c., but rather to stand a few yards from them, for these objects attract lightning, and it is better to be wet than struck by the fluid. When lightning levels spires, trees, &c., or scatters them greatly, it is called a thunderbolt, which the common people suppose to be a hard mass, like iron or stone; but this is a very wrong conception; gunpowder, fulminating-powders, electricity, &c., perform often as awful consequences as thunderbolts, so there is no need of hard, solid bodies to perform the effects we often see after thunder. We know that stones or bricks when struck with lightning often present a vitrified appearance, and the common people finding such here or there in the earth, after a thunder-storm, supposed that they were thunderbolts which fell during the phenomenon. This is, I believe, a remark of Beccaria on this oubject. Thunder and lightning sometimes occurs in a clear and serene firmament; Horace says he was convinced of the existence of a deity from witnessing such a phenomenon, and pretends that he therefore renounced Epicurism:—

> For angry Jove, with mighty force,
> Whilst all the skies were bright and clear,
> Shot through the heaven with pointed flame,
> And shook the universal frame:
> He lately drove his thund'ring horse
> And flaming chariot through the air.
> *Creech's Hor., Book I., Ode* xxxiv.

Thunder storms are great purifiers of the atmosphere, and often banish plagues and epidemics, as they destroy what we call "dry fogs." In Dr. Prouty's Bridgewater Treatise we find an account of one of these "dry fogs," which, in 1782-3, extended over all Europe. It was of a blue color; and the sun, at noon, appeared through it of a reddish dye. This haze had a peculiar odor, and deposited in several places a viscid liquid of an acid taste and unpleasant smell. At the time there were earthquakes in Calabria and Iceland, and volcanic eruptions. An epidemic catarrh, or influenza, prevailed through Europe during ihe continuance of the haze, till thunder annihilated the foggy vapor, and cleansed the air in the summer of 1783.—*J. T. Dunne.*

HAIL.

Hail usually precedes rain, often accompanies it, but seldom follows it. The hail-shower continues generally only for a few minutes, seldom longer than a quarter of an hour. The quantity of ice that falls in so short a time is prodigious, the ground being often covered several inches in depth. The clouds that produce hail are of a peculiar gray, or reddish color, often of a deep, black blue; their lower surfaces present enormous protuberances, while the edges exhibit deep and enormous indentations. How the cold is produced which causes the congelation of the watery particles, and how a hailstone, after acquiring a sufficient size to fall through the atmosphere by its own weight, remains suspended a sufficient time to acquire a volume of twelve or fifteen inches in circumference, are questions which have not as yet been satisfactorily explained; in fact, the theory of hail is still involved in great obscurity." Some countries are more subject to hail than others—France, for instance. In England, also, from Dunmow, in Essex, to the hills of Hertfordshire, hail-storms are very prevalent in the spring and summer seasons. "The devastation and ruin caused to the farmers by these storms have caused the establishment, by the Farmer's Insurance Society, of a branch for the insurance against hail-storms."—*See Brande's Dict. of Science, and Pouillet's Elements de Physique, t. ii, &c.*

THE CURCULIO.

In answer to repeated inquiries, now that the curculio is about to visit us, we shall briefly give the mode of destroying this insect, by jarring down on white sheets, according to the best improvements which have been made.

First, with regard to the mode of beating the tree,—if the bark of the trunk or branches is struck, it soon separates from the wood and makes a bad wound; and if the mallet is wrapped in cloth, or cushioned, the blows become much less effective, and only a part of the insects are felled. Besides, even a cushioned mallet will after a while injure the bark. This difficulty may be avoided in two ways,—either by sawing off a small branch, leaving a short stump to thump against; or by forming a conclave block so as to fit the trunk, and striking against this block,—the force of the blow on the bark becoming so softened as not to bruise the bark, in the same way that a hammer does not injure the knees when a lap-stone is interposed.

Secondly, with regard to the easiest way to catch and kill the falling insects. If white sheets simply are spread under the tree, either several persons are needed to carry and spread them, or much time is consumed by a single individual. The work is made expeditious by stretching each sheet on light wooden frames, two separate frames being attached to each sheet, so that it may be folded or doubled together like the leaves of a newspaper, or the covers of a book. The great advantages of this arrangement are,—one operator may walk singly through the orchard, with two such folding sheets in his hand, and extend these in a moment without assistance, under each tree; and after jarring down the curculios, instead of being compelled to search over the white surface for them, and to crush them singly between thumb and finger, the sheets are folded so to throw insects, punctured fruit and all, into a pail of hot water. A few minutes are thus sufficient to go over a large fruit garden.

As to the efficacy of this mode, it is scarcely necessary to repeat here that it depends almost wholly on being unremittingly applied at least once a day, from the moment the young fruit begins to set, when not so large as a pea, till no more curculios can be found, or for several weeks. In one experiment, 18 of these insects were caught from a small

plum tree at the first trial, yet by regular daily attention, a good crop was secured on this as well as on many other trees, which for previous years had never ripened one. Combined with the real practice of confining pigs or poultry, this remedy can scarcely fail in the most unfavorable localities in the most destructive years.—*Albany Cultivator.*

CURCULIO.

Take an old oil cask, and make in it, from time to time, as he wants to use, a strong suds of whale oil soap, (which can be procured of any of the druggists,) and to sprinkle the entire tree, from top to bottom, and the ground under the tree, thoroughly with the suds, twice or three times a week—commencing as soon as the blossoms begin to make their appearance, and continuing it until the plums are as large as a pea. It might be better to follow it until the fruit is about half grown, at about which time the curculio disappears altogether. The suds does not destroy the insect, but the whale oil soap is so offensive to them that they will not approach a tree which is protected by its odor.

He has tried this experiment every year, with a single exception, for many years past, and that every season he has tried it, his trees have been loaded down with nice full grown fruit, and that the season he omitted it, the curculio made such ravages that he did not have forty plums on all of his trees.—*Suffolk Democrat.*

POSTS INVERTED.

It is now generally believed that posts will endure much longer if inverted, than if set in their natural position. The fact, it is said, "has not been satisfactorily explained."

Now it appears to me that the difficulty in explaining this, is the same with that of explaining the circulation of the sap. The mechanism, if any there be, in the green tree, remains the same in the dry. In the green tree the sap ascends through the pores, or tubes, in the wood, and descends between the wood and bark. Hence, if a post be set in its natural position, the moisture from the ground will ascend in the same way, if not on the same principle that the sap ascends in the living tree. Hence such a post will be found wet, or moist, internally at some distance *above* the surface of the ground. If set in an inverted position, this will not often be the case (as the circulation would be downward instead of upward.) Hence such a post will generally be dry within, even *below* the surface of the ground. As moisture hastens decay, the former must perish sooner than the latter.—*Rural New Yorker.*

Water may be forced through the capillary tubes of a tree only toward its top. On this principle the finer woods are sometimes changed in color for the use of the cabinet maker. A hole is bored in the side of a tree, and a bent hollow tube has one of its ends driven into the hole, while the other end of the tube is carried up nearly the whole height of the tree. Any solution may then be poured into this tube from the top, and from the pressure arising from the height of column, it will be forced into the tree in an upward direction only. In this way woods have been colored in France while growing, and by the introduction of solution or metallic salts, they may be rendered nearly imperishable by rot.

Posts should be placed in the ground with the butts up; then bore a hole in the butt, throw in a small quantity of corrosive sublimate or common copperas, (sulphate of iron) and drive in a plug of wood. If the former be used, the centre tubes of the wood will become *kyanized*, and be thus rendered indestructible by rot and less liable to crack or wind—if the latter, the posts will last much longer than when left without such addition.

If posts be first placed with the ends in a tube containing a solution of common copperas for a few days, and then in clear lime water, the lime will be changed into sulphate of lime as received into the wood, thus leaving the capillary tubes of the wood filled with plaster of paris, (sulphate of lime) and their surface coated with oxide of iron, precipitated from the copperas. Wood so prepared will last many years longer than if used in an unprepared state.—*The Working Farmer.*

BRICK-DUST FOR CUTTINGS.

A New York correspondent of the Horticulturist writes as follows:

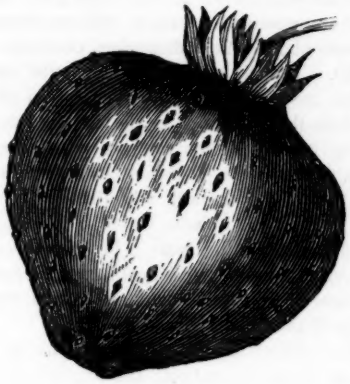
I have had great success in propagating plants lately—especially the more tender kinds of greenhouse plants. As I think my good luck depends not so much on the treatment as the *material* I use, I beg you to "make a note of it," for the benefit of your readers. This material is brick-dust—the refuse of the kiln after burning—or what may be made by taking soft bricks and pounding them up. Enough may be had at any brick-yard for a mere trifle, to last a great while—but I think the fresher it is the better. For those plants more difficult to root, such as Daphnes, Heaths, Cape Jasmines, &c., I fill shallow cutting pots entirely with brick-dust, excepting about an inch at the bottom, which is filled with coarse lumps of brick, to secure a good drainage. For plants that root more easily, I use half brick-dust and half sandy loam.

It is quite surprising how much more certainly and quickly cuttings of all sorts root in brick-dust than in sand, or in loamy soil, in the common way. "Damping off," which is so fatal to cuttings made in the ordinary way, rarely happens when brick-dust is used, and from the mass of fibre quickly thrown out from the bottom of the cuttings, I am convinced that there is something more than the texture of brick-dust which causes the much greater vigor and success of cuttings planted in the ordinary way.

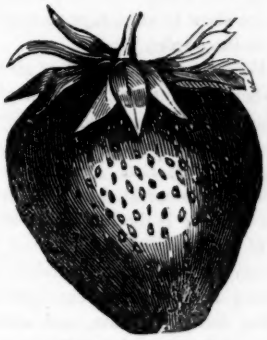
We have heard, remarks the editor, of burnt clay having been used for striking cuttings with great success, and the brick-dust probably acts in a similar manner, *i. e.*, absorbing a large supply of ammonia from the air, and giving it as food for the cutting, while its dry and gritty texture facilitates the granulation of organizable matter, and the emission of new roots.

VEGETABLE POISON.—Almost every farmer is more or less troubled with poison ivy, sumach, parsnip, and the like. After trying a great variety of remedies, I have found that a poultice made of buckwheat flour and butter milk, with a piece of blue vitrol the size of a pea, pulverised and dissolved, added to the mixture, has had the happy effect of removing the trouble and effecting a cure in a short time.—*E. S. Fox.*

STRAWBERRIES.

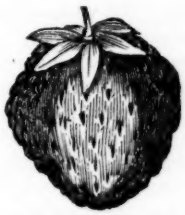


Hovey's Seedling.

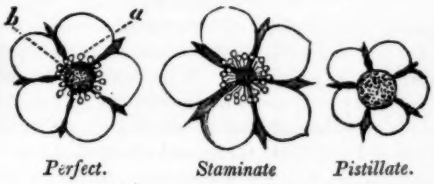


Swainstone's Seedling.

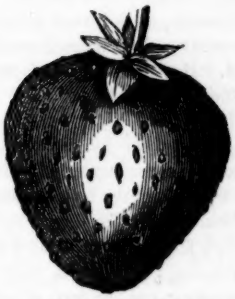
FLORAL CONDITION OF THE STRAWBERRY.



Early Virginia.



Perfect. *Staminate* *Pistillate.*



Burr's New Pine.

The strawberry is one of the most wholesome and delicious of all fruits; and as it is the earliest, and very cooling and refreshing at the hot season in which it comes in, it is worthy of more extensive cultivation. Every person who has a spot of land sufficient, should cultivate this fruit that he may have it fresh from the vines. Two square rods, under good management, will generally yield 30 to 40 quarts, which may be had in succession for three weeks, by cultivating two or three kinds. Farmers, by cultivating this fruit for their families, will save more than all the expense in meat, butter &c., and make their meals more wholesome and acceptable.

The strawberry is becoming a very important fruit for the market. Several years ago, when all the strawberries raised, for this market, were less in quantity than the single crop of some individuals now, it was apprehended that the increase of this fruit would injure the sale, and reduce the price; but the demand has increased faster than the production, and strawberries now sell more readily and at higher prices than they did when there was not one-twentieth part as many brought to market.

Under good management, this is a profitable crop. The produce of an acre varying from $200 to $800 to the acre. General average, under good culture, about $400. Some crops have exceeded $1,000 to the acre. Again, from winter-killing of plants, drought and other causes, the crop may be small.

Notwithstanding this is a small fruit, and grows on a little plant, yielding a good crop the first year after it is set, it has produced 4,000 quarts, or 125 bushels, to the acre. More than any of our grains yield, and equal to the average crop of potatoes, and selling at 20 to 30 cents a quart.

Cincinnati is the greatest strawberry market in the world. In one year the amount sold there was 6,000 bushels. One cultivator carried to the market 128 bushels daily during the height of the season.

With the great facilities for bringing in this fruit on railroads, from places where lands are cheaper and more fertile than in this region, and from the introduction of new varieties, and improvements in cultivation, we have no doubt that in a few years strawberries can be raised at a profit, and sold at 20 to 30 per cent. less than the usual prices at present. If this should be the case, there will be a demand for three or four times as many as at present. A family that buys only two or three boxes of straw-

berries when the price is 25 to 30 cents, would use ten or a dozen boxes when the price was only 17 or 20 cents per box.

Our cuts represent the largest size of the varieties, except the Early Virginia, which is small, and does not show to advantage among the others, as it does in the garden.

Early Virginia is the earliest of all our productive strawberries; very vigorous in plant, hardy, very productive, and of excellent quality. We have found by experiment that it is identical with Downing's Large Early Scarlet. It is cultivated as much or more than any other kind in New England.

Hovey's Seedling is the largest of all strawberries, and of good quality, selling high in market. It yields very largely under favorable circumstances, but the plants are much less vigorous and hardy than the Early Virginia, and much pains is necessary to have a good set of plants; and if a large crop be obtained the first year after planting, there is usually a deficiency the next year, from exhaustion, or failure of plants. These two kinds are cultivated far more than all others in New England. But other new and promising varieties are claiming a trial.

Burr's New Pine is but little known in this region yet, but we see by reports of horticultural exhibitions in other sections that it has taken the premium for fruit of the best quality.

Swainstone's Seedling is an English variety, and, though famous there, it does not succeed well here.

Jenning's Seedling is very vigorous, hardy and productive; and the fruit of a high character. It is rather acid, and is excellent with sugar. We prefer it to more mild and sweet varieties.

Boston Pine is hardy, vigorous, and very productive, if the plants are kept properly thinned. They are apt to grow too thick, and fail from this cause. The fruit is mild and sweet, and good when taken from the vines, but when it stands in the market a short time, it loses its flavor and becomes insipid. It is too transient for the market, if purchasers are nice judges.

Willey is much the same, if not identical with the Hudson, cultivated so extensively about Cincinnati. It is remarkably hardy and vigorous, a great bearer, and the fruit of good quality. But little known in this region. We have about a dozen varieties, and this outgrows them all.

Fay's Seedling, not a good bearer. We have discarded it.

Black Prince, not of the best quality, nor very vigorous. We shall exclude this also.

Richardson's Seedlings. We have these on trial.

Condition of the Flowers.—For the instruction of those who are not acquainted with botany, or are not nice observers of nature, we would remark that among trees and plants generally, their are three conditions of flowers:

First—Perfect flowers, or those which have pistillate and staminate organs in the same flower, as the apple, pear, cherry, &c.

Second—Monecious plants, which have the pistillate and staminate organs in different flowers, on the same plant. As Indian corn, cucumber, melon, &c. The silk of corn is the pistils; and the stamens are on the spindle. The pollen or dust falls from the stamens on to the silk, and this fertilizing powder is conveyed to each kernel of grain, as there is a thread of silk, or pistil, to each. Pull out the silk and there will be no grain; cut off the spindle before blossoming, and the effect will be the same. In cucumbers, and other vines, the fertilizing dust is carried from the staminate flowers to the pistillate flowers, or those that yield the fruit, by insects.

Third—Diecious plants are such as not only have the staminate and pistillate organs in different flowers, but on different trees or plants, as the shepherdia, asparagus, &c. Two shepherdia trees are set some 6 or 15 feet apart. They both blossom, but in the fall the pistillate kind, only, is adorned with beautiful red fruit. But without the staminate kind there would be no fruit.

These remarks will illustrate the floral condition of the strawberry, as represented above by the cut. In its natural state, the strawberry is perfect in its flowers, but by cultivation, and the production of seedlings, some varieties have become pistillate, and others staminate. And several varieties vary from pistillate to perfect, and from staminate to perfect. Pefect plants bear good crops, or large crops, as the Early Virginia, when standing alone. Pistillate plants bear small crops of imperfect fruit, when standing alone, as Hovey's Seedling; but with a perfect or staminate kind set near, to fertilize them, they yield large crops; some cultivators say larger than any other kind; but this we doubt, for we believe that no kind has ever exceeded the Early Virginia in yield. Staminate plants yield but light crops.

The Willey has a few stamens, and some perfect plants, which are sufficient for fertilization.

Jenning's Seedling is almost pistillate, but it has a few stamens which may be sufficient. Of this we are not certain, as we cultivate it near other varieties. We have seen accounts of very large crops of this strawberry, and we think it was without any other as a fertilizer.

Remedy for Poison.—A reader inquires for a remedy for bog water poison on the face. We are not acquainted with the nature of this poison, but most poisons are acid and may be destroyed by alkalies. A weak ley of wood ashes or potash is good for poison; so is the water of ammonia. Common salt is also good. Perhaps some of our readers can give a remedy well adapted to this particular poison.

For the New England Farmer.

EFFECTS OF SKILL AND INDUSTRY.

Messrs. Editors:—As actual cultivation is more instructive than theoretic speculation, I will briefly state my observation of the cultivated grounds of Messrs. E. & I. S. Needham, in West Danvers, at the present time. Within the last half dozen years, these gentlemen have converted about *ten acres* of their farm into a highly productive garden. Their success in the cultivation of the strawberry has surpassed all others in the vicinity of Salem. The present appearance of their vines is highly promising. Some of them, in favored localities, were in bloom as early as the 22d of April. They have been careful in their selection of the best varieties. To some extent their plants suffered from the effects of the winter, but they have enough remaining for all reasonable uses.

For four years past, their attention has been turned to the cultivation of the cranberry. They have more than half an acre covered with this plant. During the winter this ground was protected by a coating of meadow hay, and now the plants are putting forward with vigor. Between the rows they distribute a coating of pulverized peat, so as to check the growth of weeds and grasses; and by judicious ditching have removed the superabundance of water of the last and present season, which has been the greatest embarrassment of their culture. They have entire confidence in the cultivation of the cranberry, on field land; and whoever is curious to be informed on this subject, will find much instruction by a view of their grounds.

We saw in luxuriant growth the bush that yields what has been denominated the *white blackberry*. We have not before seen this, and learned that it is a very rare plant. The original, from which these were grown, was found in its native position, in the woods north of Massachusetts; and from Messrs. N.'s representation of the abundance and superior quality of the fruit, it must be well worthy of the attention of those who would encourage the products of our own hills. It ripens about the time of the common high blackberry of our woods, and resembles the fruit of the mulberry.

Among other objects worthy of notice on Messrs. N.'s grounds, is about one thousand peach trees now in the fourth year of their growth. The contrast between the vigorous appearance of these trees and many others that we have seen, led to the inquiry how it was brought about. Messrs. N. attributed their flourishing condition mainly to the fact, that in the autumn they have been headed down, by cutting off about half the growth of the preceding season. If in this way the life and form of the tree can be improved, is not the practice worthy of imitation? Would it not save the necessity of pulling up by roots many trees, as we have seen done the present spring? Messrs. N. have been highly successful in the cultivation of apple, pear and quince trees. But as we saw nothing to distinguish their culture particularly on this subject, we forbear to enlarge. We have ventured to notice the culture of the Messrs. Needhams that common farmers may understand how readily their lands may be converted into productive gardens, by the application of skill and industry; and at the same time afford an ample remuneration for all labor applied. Such we understand to have been the case, in regard to Messrs. Needham's culture. We know it is easy for the capitalist to have a beautiful garden, where the cost is not counted; but what we want is beautiful gardens that shall sustain themselves. If these hasty notes are deemed worthy of your notice, and shall have the effect to induce others "to go and do likewise," we shall feel amply rewarded. J. W. P.

Danvers, May 25, 1851.

APPLE TREES.

Old trees should be thoroughly scraped and then washed with lye or whitewash; the grass should be kept from growing around every tree. Compost is good to be put around the trunk of the tree to prevent the grass from growing and to nourish the tree. Meadow muck may be used to prevent the grass from growing and keep the ground light around the tree. If trees are managed in this way the borer may easily be detected in his work of destruction. Perhaps some of your readers will say that their orchard is not troubled with borers, for they never saw one in their life. Perhaps some think there is no such thing as an apple tree borer—they imagine it is a sort of an editor's whim; but I would say to each and every farmer to examine his trees and see if he cannot find such a thing as a borer. They are about sure to destroy a young tree if left to grow uncultivated in the grass land. They deposit their eggs in August, the grub is hatched in May or June. The young borer soon beds himself into the tender bark near the ground, and in the following fall he beds himself into the wood and then takes his course up the tree from six to twelve inches. The second summer he bores out of the tree and becomes a fly.—The borer may be easily detected by the chips that he throws out resembling saw dust; he may be killed by cutting the bark off around where he has worked, or if he has gone into the wood, by inserting a wire into the hole. If the grass is kept away from the trees the farmer can look to his trees as he passes by them during the summer, and if there are any borers he will see their works. Trees managed in this way become hard near the ground, therefore it is very difficult for the young borer to get into the bark.

Trees that do not bear good fruit should be grafted. I usually set about two-thirds of the grafts that I intend to have set in the trees the first spring, and the remainder the next spring. About the third or fourth year I take all of the old top off; care should be taken to keep the sprouts off, for if suffered to grow they will injure the grafts very much. This rule will not apply to young and thrifty trees; they should not be trimmed so much. The farmer must use judgment about trimming his trees and see that the grafts get a proper growth. If the graft grows after the leaves begin to fall from other apple trees, nip the end of the graft and then it will become hard for winter and not die, as it will if left to grow late in the fall.—In most cases one graft grows faster than the other that is set in the same stalk; if so, when the grafts are from two to four years old, insert a saw between the grafts and saw the smallest one out, and then the stump will heal over and form a much better limb than if both were suffered to remain.

Young trees that spring spontaneously on the farm should be taken up and set in some choice place near the house, and budded in August. It

is much the best way to take up little trees and cut the tap root off and set them in light land, for in this way when the tree is old enough to set it will have a good set of roots; the tree may be taken up the second time without much injury. If left to grow in its natural place until it is large enough to set, if the borers do not destroy it, it will be very difficult to take it up without injuring the roots. Every farmer should have a nursery of young trees to be cultivating when he has leisure time. Let every farmer do his own grafting and budding. If you do not know how, employ some experienced hand to learn you. What if it does cost you one or two dollars; you will get your pay ten fold. Some say they have no time, they cannot do it because they have so much to do on the farm; but every farmer has time enough to take care of his apple trees. How many farmers go to the store or tavern and spend their leisure time talking about their neighbors and cursing the book farming. How much better it would be for them if they would stay at home and cultivate their apple trees.

Let every farmer commence this year and resolve in his mind that he will do something for his apple trees this year. Don't wait until next year, for next year will never do it.—Noah W. Hardy.—*Granite Farmer.*

MANAGEMENT OF SOILS.

A soil would never get exhausted, if managed with skill, but would continue to improve in depth and fertility in proportion to the industry bestowed upon it. The food of plants, it is true, may be exhausted from the soil by a repetition of cropping with any one family of plants, if we neglect the application of such fertilizers as may have been taken from the soil by that family; but no part of the growing season is required for the soil to rest, or be fallow, if judiciously managed by a successive varying of the crops, or by supplying to them such food as may be a compensation for what has been taken off by the previous crop. The first object to be attained for securing a certain and profitable return of produce from the soil must be *the rough drainage;* the next object is, *breaking into the subsoil* to the desired depth—not without first considering whether it is proper and profitable to shift or turn up the subsoil at once to the influence of the atmosphere, or whether it be best to break into it well first, by shifting the surface soil and allowing the subsoil to remain and receive—first the beneficial influence of the atmosphere, and then—at the trenching, a portion of the subsoil may be safely stirred up and mixed with the surface soil; this practice continued for every succeeding crop, will establish a healthy fertilizing surface soil to any desired depth.

If repeated stirrings of the surface are adopted, according to the nature of the soil and weather, every growing crop will continue in healthy luxuriance, without ever suffering by receiving injury from too much moisture, drought or frost. In addition, by constantly scarifying, hoeing and forking the surface soil, not only obnoxious insects and their larvæ are expelled, but weeds would never make their appearance, much less have a chance of committing their accustomed robbery of the soil and crops. Besides, by such repeated stirring, the soil is always prepared, sweet and healthy, for succeeding crops—no mean consideration, either, when we observe the loss of time and produce occurring to such a ruinous extent in some localities, by allowing weeds to rob and choke the growing crops, and to shed their seeds, productive of a progeny similarly injurious to the crops next in rotation.

The application of manure is most essential, and may be applied most beneficially when the soil is established in a healthy condition, and maintained thus by a constant attention to surface stirring. Yet the application of manure is a secondary consideration; for though it may be very liberally applied, and with considerable expense, yet, without first insuring the healthiness of the soil, much property and labor will be sacrificed.—*Cottage Gardener*

PREPARATION OF BONES FOR MANURE.

A great obstacle to the use of bones as manure, in this country, has heretofore been the expense of preparing them. The modes usually adopted, have been to crush them in mills designed for the purpose, or to mix them with sulphuric acid. Latterly the process of pulverizing by steam has been resorted to in Britain, and where large quantities are to be prepared, this plan may be more economical than either of the others named. But we cannot see why bones may not be more cheaply pulverized by *fermentation.* In a fresh state, they contain a large per centage of nitrogen, which under favorable circumstances causes them to undergo a strong fermentation. We have known a few instances of their being mixed with unleached wood-ashes, in a heap, with a covering of muck to absorb the gases which might be evolved; the mass soon began to heat, and by being turned over a few times, the bones became sufficiently reduced for use as manure. A writer in the *North British Agriculturist* gives an account of a mode adopted by him for reducing bones, which is worthy of notice. He says:—

"A quantity of bones, in a crushed state, was mixed with an equal bulk of common sand, and well watered; the whole was then covered over with a coating of coal ashes, about 6 inches thick; this was done to prevent as much as possible the escapes of ammonia. In a few days after I found, however, that the moistened bones began to generate intense heat, which soon brought on putrification. The size of the heap next showed to have lessened considerably, and on being examined into, the bones were found to have disappeared, save a small portion of the outside; even these were corroded from the effects produced by internal decomposition. In fine, the appearance of the heap was changed to a blue mouldy, gelatinous substance, which if touched with the back of a spade, or even rubbed between the hands, could be reduced to a fine powdery texture.—*Albany Cultivator.*

WALNUT LEAVES IN THE TREATMENT OF DISEASE.

Dr. Negrier, physician at Angiers, France, has published a statement of his success in the treatment of scrofulous diseases, in different forms, by preparations of walnut leaves. He has tried the walnut leaves for ten years, and out of fifty-six patients, afflicted in different forms, thirty-one were completely cured, and there were only four who appeared to have obtained no advantage.

The infusions of the walnut tree leaves are made by cutting them and infusing about a good pinch

between the thumb and fore-finger, in half a pint of boiling water, and then sweetening it with sugar. To a grown person M. Negrier prescribed from two to three teacupsfull of this daily. This medicine is a slightly aromatic bitter, its efficiency is nearly uniform in scrofulous disorders, and it is stated never to have caused any unpleasant effects. It augments the activity of circulation and digestion, and to the functions imparts much energy. It is supposed to act upon the lymphatic system, as under its influence the muscles become firm, and the skin acquires a ruddier hue. Dry leaves may be used throughout the winter, but a syrup made of the green leaves is more aromatic. A salve made of a strong extract of the leaves mixed along with clean lard, and a few drops of the oil of bergomont, is most excellent for sores. A strong decoction of the leaves is excellent for washing them. The salutary effects of this medicine do not appear on a sudden—no visible effect may be noticed for twenty days, but perseverance in it, says M. Negrier, will certainly effect a cure.

As walnut-tree leaves are plenty and cheap enough in America, and as the extract of them is in no way dangerous nor unpleasant to use, and as scrofula cases are not uncommon, a trial of this simple medicine should be made. In directing attention to it, good results may be expected. It is our opinion that every country has within its own borders those medicines best suited to the wants of its inhabitants; to discover where and what those medicines are should engage the attention of our physicians.—*Scientific American.*

HOW CATTLE KILL TREES.

It is a noticeable fact that a tree ever so thrifty and of whatever kind, to which cattle can gain access, and under which they become habituated to stand, will very soon die. In the case of a solitary shade tree in a pasture, or by the road-side, this is of common occurrence. The query may have been suggested, to what this is owing. In the first place the rubbing of a tree by the necks of cattle is highly pernicious, and if persisted in it will commonly destroy them sooner or later; but if the body of the tree be cased so that their necks cannot touch it, death will ensue just as certainly if they are allowed to tramp the earth about it. But why should tramping the earth destroy the tree? The reason is one of wide and important application to the laws of vegetable growth. *The roots of plants need air*, if not as much, yet just as truly as the leaves and branches. Their case is analogous to that of fishes, which though they must have water must have air also: viz., just about as much as permeates the water. If it be all shut off, so that none which is fresh can get to them, they will exhaust the supply on hand, and then die; precisely as a man in a close room will use up the air he has and then die for want of more.

So the roots of trees and vegetables want air.—When the earth is in a normal or natural condition, it is full of interstices and channels by which air gets to them. But if cattle are allowed to tramp down the earth, and the sun aids their work by baking it at the same time, a crust like a brick is formed, wholly impervious to the atmosphere, and the tree yields to its fate. So a tree cannot live if its roots are covered with a close pavement. They will struggle for life by creeping to the surface and hoisting out a brick here and a stone there, or find a crack where their noses can snuff a little breath; but if fought down and covered over, will finally give it up. So if a tree be thrust into close clay, or its roots are kept under water, it refuses either to be an aquatic or to put up with its alreminous prison. It will grow as little as possible and die the first opportunity.—*Prairie Farmer.*

SOWING CORN FOR FODDER.

Mr. Editor :—I observe, in a late number of the Michigan Farmer an inquiry for the best mode of raising corn for fodder, and having tried several different ways, the results may be of benefit to others.

A common, and a very objectionable practice, is to sow broadcast. This requires at least four bushels to the acre, and even with this amount of seed, the growth is not dense enough to keep down the weeds, and as a consequence, the ground is left in a foul condition.

The best way is to sow in drills. First plough and harrow the ground, as if for corn or potatoes; run furrows in one direction, with one horse, about three feet apart; with a hand-basket of corn on the left arm, walk rapidly along side of the furrow, strewing the seed with the right hand, at the rate of about fifty grains to the foot, which will be about two bushels and a half to three bushels per acre. A little practice will enable any one to do this evenly and expeditiously. The seed may be covered in the best manner, by means of a one-horse harrow, a one-horse cultivator, or a two-horse harrow, passed lengthwise with the furrows. Two men will thus put in five or six acres in a day.

The only subsequent culture needed, is to pass a one-horse cultivator between the rows, when the corn is about a foot high. No hoeing is required. Its growth will soon cover the whole ground, and all weeds, no matter how thick they may be, will be completely smothered and destroyed; and when, at the close of summer, the crop is removed, the ground will be left as smooth and clean as a floor. No crop have I ever seen equal to this, for reducing grassy, weedy soil, into mellow condition, in a single summer.

If the crop stands erect, it is most conveniently cut with a stiff scythe. A little practice will enable the workman to throw it all in an even swath, with the heads in one direction, so as to admit of easy binding in bundles. If much thrown down by storms, it may be cut with a corn-cutter. When bound, it is to be put up in large, substantial shocks, to stand several weeks, or till winter, unless the ground is to be sown with wheat, in which case the crop must be drawn off and deposited to dry, elsewhere.

Every beginner spoils his first crop, by its *heating in the stack.* Even after drying several weeks, there is moisture enough in the stalks to cause violent fermentation. The only mode of preventing this disease, is either to leave the shocks on the ground till winter, or to build very small sacks, with three rails placed upright together at the centre, for ventilation, and applying plenty of salt.

Fodder thus grown, and well cured and salted, is greatly preferred, by cattle, to hay. A neighbor thinks three tons are as good as four tons of good hay. It should be grown so thick, that the stalks will be quite small; then they will be wholly eaten by cattle, and none lost.

I have tried different quantities of seed per acre, and find that a much less rate than about three bushels is attended with a diminished crop, although the stalks may be taller. One bushel per acre will yield but little more than half as much.

I usually obtain, on land that will yield thirty or thirty-five bushels of corn per acre, from four to six tons per acre of dried fodder. Counting all expenses, including interest on fifty dollars per acre for the land, the dried fodder, as an average for five or six years past, has cost me about one dollar and a half per ton. Hay is usually sold here for six or seven dollars a ton, and sometimes for ten. Yet it is astonishing how reluctant our farmers are in adopting the corn fodder cultivation. I hope the farmers of Michigan may set a better example of economy.

The best variety of corn appears to be that which will afford the greatest number of stalks to the quantity of seed sown. Coarse fodder is not as good as fine. A rather moist soil is best, as immense quantities of moisture are thrown off by such a mass of leaves.

Besides the cheapness of this crop, and the great ease of its cultivation, it possesses the following advantages: 1. It may be sown after the hurrying work of spring is accomplished, or at the end of spring, or early in summer. 2. It may be harvested after the wheat and hay crop are secured, or during the comparatively leisure season at the close of summer. 3. Not yielding any grain, it doos not exhaust the soil, and is, perhaps, the best crop to precede wheat. 4. It is an admirable crop for smothering and destroying weeds and grass.

A brief glance at the advantages of the general cultivation of this crop may not be out of place. The value of the annual hay crop in the United States is about one hundred millions of dollars. Those who have already adopted the corn fodder crop, winter their cattle at less than 1-2 their former expense. Would it, therefore, be extravagant to believe that 1-4 of the present expense in the use of hay throughout the country would be saved by its general use? Yet one quarter is about twenty-five millions of dollars yearly—enough to endow agricultural schools, and build railroads, by the score—and is well worthy of some exertion for its introduction at large. T.

Macedon, N. Y., 3d mo. 21, 1851.

Michigan Farmer.

VALUABLE AND EASY.

A cure that costs neither money nor trouble is valuable. Chambers's Journal says of "Corns:"—

"There is, no doubt, some quackery in the corn-doctor's trade, but there is more ignorance. For the benefit of both him and his patients, we will now disclose a secret which will relieve humanity from a load of misery, not the less difficult to bear, that it is unpitied or ridiculous. The cause of corns, and likewise of the torture they occasion, is simple friction; and to lessen friction, you have only to use your toe as you do in like circumstances a coach-wheel—lubricate it with some oily substance. The best and cleanliest thing to use is a little sweet oil, rubbed upon the affected part (after the corn is carefully pared) with the finger, which should be done on getting up in the morning, and just before stepping into bed at night. In a few days the pain will diminish, and in a few days more it will cease, when the nightly application may be discontinued.

Mechanics' Department, Arts, &c.

GLAZING EARTHERN WARE.

Messrs. Editors:—I see in a late number of the Prairie Farmer an erroneous statement concerning earthern ware which I wish to correct. I have been engaged in manufacturing black and brown earthern ware for about 40 years, and have succeeded in making some improvements in the business; and I must say I am surprised to find any one so ignorant at this time and in this day of improvement in science as to reiterate the old and exploded notion that brown or glazed ware is poisonous when made of the proper material and properly burnt. As for cobalt being used in glazing I have never heard of such a thing before, but if the materials of which glazing is composed were in some degree poisonous before being combined and burnt, the action of heat reduces the whole to solid glass, and in that state I positively assert that no more poisonous substance can be extracted from an earthenware pot or dish properly made than from a glass tumbler; but those who have tin have all the benefit of whatever poison there may be in our glazing before it is manufactured—now as there is no substance or acid known in chemistry, except one, that will decompose or reduce glass to its original shape, much less liquids used in culinary purposes, there need be no alarm about poison in glazed ware provided that glazing is run smooth, which shews it has undergone a proper state of fusion; but there is danger of using jars for preserves if they are not made of good clay that burns hard and makes a solid body, in which case the glazing will come off in scales, and of course it will kill a dog to eat broken glass. The way to tell good ware from poor is by the sound; if it rings clear it is good. As to so many having been poisoned with a pie, I don't believe the poison was from the dish, but in the chicken or something else. It puts me in mind of a man who fell from his horse and broke his neck, and a quack found out he had taken a dose of calomel some years before, so he declared he came to his death by the use of calomel. S. McAfee.

Prairie Farmer.

LITHOGRAPHY.

THE ART OF PRINTING FROM STONE.

The process of lithographing is based upon the fact that printing ink, being largely composed of oil, will not adhere to any surface which is wet with water. Every one knows how utterly impossible it is to mix oil and water. To lithograph, then, all that is necessary is to draw on the surface of a dry slab of stone, with a greasy crayon, whatever is desired to be printed. A weak solution of nitric acid is then rubbed over the stone, which fastens the drawing so that it cannot be rubbed off. After this a solution of gum arabic is passed over the surface, and then the stone is ready for printing. By means of a sponge, water is now rubbed on the stone, and while yet wet the inking roller is applied. The ink of course adheres to the lines of the drawing because they are oily, but to the wet stone it does not stick. The paper is now laid on, and with the stone passes through the press;

the result being a beautiful and exact copy of whatever is drawn.

The stone employed for lithography is of a peculiar kind of lime and clay nature, resembling in appearance a smooth yellow bone, yet possessing the quality of absorbing water. It is found chiefly in Bavaria, though there are quarries of it in England. The Bavarian stones, however, are those most universally employed, and their importation is a considerable object, in commerce. They are worth, in New York, from 5 to 10 cts. per pound. —*N. Y. Sun.*

NEW BARREL MACHINE.

The Glasgow Daily Mail says:—An invention has been patented for constructing casks, barrels, puncheons, and everything in the cooperage line, in a space of time which literally baffles belief. One of the machines is at present in operation at the St. Rollox works. We have inspected it, and were certainly astonished to find the staves of an ordinary sized cask prepared, put together, and headed in little more than ten minutes. The thing was perfect—the cutting and joining were done with mathematical precision, and all the hands had really to do, was to arrange the staves and fix the heads; all the rest was accomplished by machinery, and with so little trouble, that the article was finished before one could fancy that a hoop was on, The mechanism, like that of almost all important inventions, is exceedingly simple; the only wonder is, when it is examined, how so clear and easy a mode of doing a great deal of work with a very small amount of labor has not been hit upon before now. The patentee of this great invention is Mr. James Roberston, of Liverpool.

We should not be surprised to find it a modification of an American invention, judging from the brief description in the Mail.—*Far. and Mech.*

Ladies' Department.

FOOD AND DRINKS FOR THE SICK.

As this is a season of the year when more or less sickness prevails, we have thought that we could not perhaps render better service to our female friends than by giving a few recipes for cooking or preparing food and drinks for sick persons. Many benevolent families, which are blessed with health themselves, may have sick and poor neighbors, for whom it would be a mercy and also a privilege to procure and send occasionally a nice dish, if they only possessed the requisite knowledge for preparing it. To such we recommend the following chapter, with the hope that when occasion offers they will not be slow to put in requisition the knowledge it affords. We copy them from that true friend of American housewives, Mrs. Beecher.—*Rural New-Yorker.*

General Remarks on the Preparation of Articles for the Sick.—Always have everything you use very sweet and clean, as the senses of taste and smell are very sensitive in sickness. Never cook articles for the sick over a smoke or blaze, as you will thus impart a smoky taste. When the mixture is thick, stir intently to prevent burning. Be very careful, in putting in seasoning, not to put in too much, as it is easy to add but not to abstract.

The nicest way to flavor without lemon or orange peel is to rub loaf sugar on the peel till oil is absorbed into it, and then use the sugar to flavor and sweeten. Herbs and spice, when boiled to flavor, should be tied in a rag, and they will not then burn on the vessel at the edge.

Chicken Tea is made by boiling any part of the chicken, and using the broth weak, with only a little salt.

Chicken Broth is made by boiling chicken a good deal, and skimming very thoroughly and seasoning with salt. A little rice or pearl barley improves it, or a little parsley may be used to flavor it.

Chicken Panade is made by pounding some of the meat of boiled chicken in a mortar, with a little broth, and also a little salt and nutmeg. Then pour in a little broth and boil it five minutes. It should be a thick broth.

Milk Porridge.—Make thin batter with Indian meal and wheat flour, a spoonful of each, and pour into it a quart of boiling milk and water, equal portions of each. Salt it to the taste. Boil ten minutes.

Rice Gruel and Corn Meal Gruel.—Make a thin paste of ground rice or Indian meal, and pour into boiling water, or boiling milk and water. Let the rice boil up once, but the corn meal must boil half an hour. Season with salt, sugar and nutmeg. A little cream is a great improvement.

Arrowroot and Tapioca Gruels.—Jamaica arrowroot is the best. Make a thin paste, and pour into boiling water, and flavor with sugar, salt and nutmeg. A little lemon juice improves it.

Tapioca must be soaked in twice the quantity of water over night, then add milk and water, and boil till it is soft. Flavor as above.

Dropped Egg.—Salt some boiling water, and drop in a raw egg out of the shell, taking care not to break the yolk; take it up as soon as the white is hardened. Dip some toast in hot water and put salt or butter upon it, and lay the egg on to it.

Herb Drink.—Balm tea is often much relished by the sick. Sage tea is also good. Balm, Sage and sorrel, mixed with sliced lemon, and boiling water poured on, and then sweetened, is a fine drink. Pennyroyal makes a good drink to promote perspiration.

Herb drinks must be often renewed, as they grow insipid by standing.

Other Simple Drinks.—Pour boiling water on to tamarinds, or mashed cranberries, or mashed whortleberries, then pour off the water and sweeten it. Add a little wine if allowed.

Toast bread very brown and put in cold water, and it is often relished. Pour boiling water on to bread toasted very brown, and boil it one minute, then strain it and add a little sugar and cream.

Simple Wine Whey.—Mix equal quantities of water, milk and white wine. Warm the milk and water, and then add the wine. Sweeten to the taste.

A Great Favorite with Invalids.—Take one third brisk cider, and two-thirds water, sweeten it, and crumb in toasted crackers, and grate on nutmeg. Acid jellies will answer for this, when cider cannot be obtained.

Water Gruel.—To two quarts of boiling water, add one gill of Indian meal and a heaped table spoonful of flour, made into a paste and stirred in

the water. Let it boil slowly twenty minutes. Salt, sugar and nutmeg to the taste.

SAGO FOR INVALIDS.—Wash one large spoonful of sago, boil it in a little water, with a pinch of salt and one or two sticks of cinnamon, until it looks clear; then add a pint of milk, boil all well together and sweeten with loaf sugar.

STUDY THE CHILD'S CAPACITIES.

If some are naturally dull, and yet strive to do well, notice the effort and do not censure the dulness. A teacher might as well scold a child for being near-sighted, as for being naturally dull.—Some children have a great verbal memory, others are quite the reverse. Some minds develop early, others late. Some have appeared stupid, because the true spring of character has never been touched. The dunce of a school may turn out in the end the living, progressive, wonder-working genius of the age. In order to exert the best spiritual influence, we must understand the spirit upon which we wish to exert that influence. For with the human mind we must work with nature, and not against it.—Like the leaf of the nettle, if touched one way, it stings like a wasp; if the other, it is softer than satin. If we then would do justice to the human mind, we must find its peculiar characteristics, and adapt ourselves to individual wants. In conversation on this point with a friend who is the principal in one of our best grammar schools, and to whose instruction I look back with delight, "Your remarks," said he, "are quite true; let me tell you a little incident which bears upon this point. Last summer, I had a little girl who was exceedingly behind in all her studies. She was at the foot of the division, and seemed to care but little about her books. It so happened that as a relaxation, I let them at times during school hours unite in singing. I noticed that this girl had a remarkably clear, sweet voice; and I said to her, 'Jane, you have a good voice and you may lead in the singing.' She brightened up, and from that time her mind seemed more active. Her lessons were attended to, and she soon gained a high rank. One day as I was going home, I overtook her with a school companion. 'Well, Jane,' said I, 'you are getting along very well; how happens it you do much better now than at the beginning of the quarter?'

"'I do not know why it is,' she replied.

"'I know what she told me the other day,' said her companion.

"'And what was that?' I asked.

"'Why, she told me she was encouraged.'"

Yes, here we have it—she was encouraged! She felt she was not dull in everything. She had earned self-respect, and thus she was encouraged.

Some twelve or thirteen years ago, there was in the Franklin School an excessively dull boy. One day the teacher wishing to look out a word, took up the lad's dictionary, and on opening it found the blank leaves covered with drawings. He called the boy to him.

"Did you draw these?" said the teacher.

"Yes sir," said the boy, with a downcast look.

"I do not think it is well for boys to draw in their books," said the teacher, "and I would rub these out if I were you; but they are well done. Did you ever take lessons?"

The boy felt he was understood. He began to love his teacher. He became animated and fond of his books. He took delight in gratifying his teacher by his faithfulness to his studies; while the teacher took every opportunity to encourage him in his natural desires. The boy became one of the first scholars, and gained the medal before he left school. After this he became an engraver, laid up money enough to go to Europe, studied the works of masters, sent home productions from his own pencil, which found a place in some of the best collections of paintings, and he is now one of the most promising artists of his years in the country. After the boy gained the medal, he sent the teacher a beautiful picture as a token of respect; and I doubt not, this day he feels that teacher, by the judicious encouragement he gave to the natural turn of his mind, has had a great moral and spiritual effect on his character.

A HAPPY HOME.

Almost any one can be courteous in a neighbor's house. If anything goes wrong, or is out of time, or is disagreeable, there it is made the best of, not the worst; even efforts are made to excuse it, and to show it is not felt; or if felt, it is attributable to accident, not to design; and this is not only easy but natural in the house of a friend. I will not, therefore, believe that what is so natural in the house of another, is impossible at home, but maintain, without fear, that all the courtesies of social life may be upheld in domestic society. A husband, as willing to be pleased at home, and as anxious to please as in a neighbor's house, and a wife as intent on making things comfortable every day to her family, as on set days to her guests, could not fail to make home happy.

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